

Page 38, line 5, delete "decided" and insert  
--determined--;

line 6, delete "decided to be" and insert --it  
is--.

Page 39, line 6, delete "prior art 11" and insert  
--afore-mentioned Ullman publication--;

line 18, delete "to".

Page 40, line 2, delete "to";

line 16, delete "the";

line 18, delete "apply" and insert --be used--.

Page 41, line 7, delete "as well as" and insert --and--.

#### IN THE CLAIMS

Please amend the claims as follows:

- A1
1. (Amended) A data warehouse system, comprising:
    - at least one client device for accepting a processing request from a user;
    - at least one server provided with a database [respectively] and used for searching said database according to an access request from said client device;
    - at least one data collector for collecting data requested by said user;
    - a database for storing data collected by said data collector; and

a network for connecting said client device to a desired server via said data collector; wherein

said data collector includes: [;]

a client management unit for managing at least one client device;

a query analysis unit for analyzing a request from said client device;

a replica creation request analysis unit for analyzing each replica creation request from said client device;

a communication control unit for [deciding] selecting a procedure for accessing at least one of said servers according to [the] analysis result from said query analysis unit; and

A1 a replica creation management unit for creating a replica according to an analyzed creation request and managing said replica using a replica management table which corresponds the content of said created replica to [the] information related to the location of said replica stored in said database; and

said server includes: [;]

a communication control unit for receiving a query analysis result transmitted from at least one of a plurality of said data collectors; and

a query processing unit for searching the database of each server and creating a response to said received query analysis result.

2. (Amended) A data warehouse system, comprising:  
at least one client device for accepting a  
processing request from a user;  
at least one server provided with a database  
[respectively] and used for searching said database according  
to an access request from said client device;  
at least one data collector for collecting data  
requested by said user; and  
a database for storing data collected by said data  
collector; wherein  
said data collector includes;  
a replica creation request analysis unit for  
analyzing a replica creation request from said client device;  
a client management unit for grouping a plurality of  
[clients] client devices which can share data according to an  
analyzed creation request and managing a plurality of said  
[clients] client devices; and  
a replica creation management unit for creating a  
replica according to an analyzed creation request and managing  
said replica using a replica management table which  
corresponds the content of said created replica to [the]  
information related to the location of said replica stored in  
said database.;

Claim 3, line 2, delete ";" and insert --,--;  
line 5, delete "said" and insert --a--, same  
line 5, after "client" insert --device--.

A2

4. (Amended) A data warehouse system, comprising:

- at least one client device for accepting a processing request from a user;
- at least one server provided with a database [respectively] and used for searching said database according to an access request from said client device;
- at least one data collector for collecting data requested by said user;
- a database for storing data collected by said data collector; and
- a network for connecting said client device to a desired server via said data collector; wherein

said data collector includes: [;]

- a client management unit for managing at least one client device;
- a query analysis unit for analyzing a request from said client device;
- a replica creation request analysis unit for analyzing a replica creation request from said client device;
- a communication control unit for [deciding] selecting a procedure for accessing at least one of a plurality of said servers according to [the] an analysis result from said query analysis unit;
- a replica creation request analysis unit for analyzing a replica creation request from said client device;
- and
- a replica creation management unit for creating a replica according to an analyzed creation request and managing

~~said replica using a replica management table which corresponds the content of said created replica to the information related to the location of said replica stored in said database; and~~

~~said server includes: [;]~~

~~a communication control unit for receiving a query analysis result transmitted from at least one of a plurality of said data collectors;~~

~~a query processing unit for searching the database of each server and creating a response to [said] a received query analysis result;~~

~~A2 a delivery data management table which includes [the] a region condition, quality condition, delivery destination, and delivery method of [the] data to be delivered to said data collector; and~~

~~a delivery data management unit for managing said delivery data in accordance with said table.~~

5. (Amended) A data warehouse system, comprising:

at least one client device for accepting a processing request from a user;

at least one server provided with a database [respectively] and used for searching said database according to an access request from said client device;

at least one data collector for collecting data requested by said user; and

a database for storing data collected by said data collector; wherein

said data collector includes: [;]

a client management unit for managing at least one client device;

a query analysis unit for analyzing a request from said client device;

a communication control unit for [deciding] selecting a procedure for accessing at least one of said servers according to an analysis result from said query analysis unit;

a replica creation request analysis unit for analyzing a replica creation request from said client device; and

A2 a replica creation management unit for creating a replica according to an analyzed creation request and managing said replica using a replica management table which corresponds the content of said created replica to the information related to the location of said replica stored in said database; and

said server includes: [;]

a communication control unit for receiving a query analysis result transmitted from at least one of a plurality of said data collectors;

a query processing unit for searching the database of each server and creating a response to [said] a received query analysis result;

a delivery data management table which includes [the] a region condition, quality condition, delivery destination, and delivery method of [the] data to be delivered

to said data collector;

a delivery data management unit for managing said delivery data in accordance with said table; and

a load management unit for managing the load information of said server and estimating the server load when processing a delivery request accepted newly for said delivery data.

6. (Amended) A data warehouse system, comprising:

at least one client device for accepting a processing request from a user;

AZ  
at least one server provided with a database [respectively] and used for searching said database according to an access request from said client device;

at least one data collector for collecting data requested by said user; and

a database for storing data collected by said data collector; wherein

said data collector includes: [;]

a client management unit for managing at least one client device;

a query analysis unit for analyzing a request from said client device;

a replica creation request analysis unit for analyzing a replica creation request from said client device;

a communication control unit for [deciding] selecting a procedure for accessing at least one of a plurality of said servers according to [the] an analysis

result from said query analysis unit;

a replica creation request analysis unit for analyzing a replica creation request from said client device; and

A2 a replica creation management unit for creating a replica according to an analyzed creation request and managing said replica using a replica management table which corresponds the content of said created replica to [the] information related to the location of said replica stored in said database; and

said server creates a replica in said data collector before processing a query from a client device, according to a replica creation request to which said client device gives part or the whole of the data to access when [in] processing [of] a query.

Claim 7, line 1, delete ";" and insert --,--;

line 3, delete ";" and insert --:--;

line 4, delete "deciding" and insert

--determining--;

line 6, delete "said" (second occurrence) and insert --a--.

Claim 8, line 2, delete ";" and insert --,--;

line 3, delete ";" and insert --:--.

A3 9. (Amended) A data warehouse system, comprising:  
at least one client device for accepting a processing request from a user;



at least one server provided with a database [respectively] and used for searching said database according to an access request from said client device;

at least one data collector for collecting data requested by said user; and

a database for storing data collected by said data collector; wherein

said data collector includes: [;]

a client management unit for managing at least one client device;

a query analysis unit for analyzing a request from said client device;

A3 a communication control unit for [deciding] selecting a procedure for accessing at least one of said servers according to [the] an analysis result from said query analysis unit;

a replica creation request analysis unit for analyzing a replica creation request from said client device, said request including at least one of the conditions for specifying [the] a range, precision, freshness, and priority of [the] data to be accessed by said client device; and

a replica creation management unit for creating a replica according to an analyzed creation request and managing said replica using a replica management table which corresponds the content of said created replica to [the] information related to the location of said replica stored in said database.

10. (Amended) A data warehouse system in accordance with claim 9<sub>1</sub>[;] wherein

said server includes:[;]

a data extraction unit for extracting data for a replica creation request including a condition for specifying a data precision through any of the following processings according to the object data type:[.]

(1) Sampling or extracting each field for record data in cooperative databases;

(2) Creating a summary or extracting of each keyword for text data;

(3) Reversible compression, irreversible compression, frame extraction, reduction of colors, reduction of resolution, or contraction in size for still picture image data;

(4) Reduction of frames or compression of picture images in each frame for dynamic picture image data; and

(5) Reduction of sampling rates, adjustment of sound quality, or conversion to character data for voice data.

11. (Amended) A data warehouse system, comprising:  
at least one client device for accepting a processing request from a user;

a plurality of servers provided with a database [respectively] and used for searching said database according to an access request from said client device;

at least one data collector for collecting data requested by said user; and

a database for storing data collected by said data

collector; wherein

said data collector includes: [;]

a client management unit for managing at least one client device;

a query analysis unit for analyzing a request from said client device;

a communication control unit for [deciding] selecting a procedure for accessing at least one of a plurality of said servers according to [the] an analysis result from said query analysis unit;

a replica creation request analysis unit for analyzing a replica creation request from said client device;  
and

A3 a replica creation management unit for creating a replica according to an analyzed creation request and managing said replica using a replica management table which corresponds the content of said created replica to [the] information related to the location of said replica stored in said database; and

said replica creation management unit includes: [;]

a data collector negotiation unit for negotiating with said server to [decide] determining data for which a replica is to be created according to said replica creation request and computer resources usable by said data collector and said server;

said server includes: [;]

a communication control unit for receiving a query analysis result transmitted from at least one of a plurality

of said data collectors;

a server negotiation unit for negotiating with said data collector for replica creation conditions according to computer resources usable by said server; and

A3 a query processing unit for searching a database at said server side and [create] for creating a response to a received query analysis result.

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Claim 12, line 2, delete ";" and insert --,--;  
line 3, after "server" insert --further--, same  
line 3, delete ";" and insert --:--.

Claim 13, line 2, delete ";" and insert --,--;  
line 5, delete "the".

Claim 14, line 2, delete ";" and insert --,--;  
line 3, delete ";" and insert --:--;  
line 4, delete "of" and insert --indicating--.

Claim 15, line 2, delete ";" and insert --,--;  
line 3, delete ";" and insert --:--.

Claim 16, line 2, delete ";" and insert --,--;  
line 5, after "client" insert --device--.

Claim 17, line 2, delete ";" and insert --,--.

Claim 18, line 2, delete ";" and insert --,--.

A4

19. (Amended) A data warehouse system, comprising:

- at least one client device for accepting a processing request from a user;
- at least one server provided with a database [respectively] and used for searching said database according to an access request from said client device;
- at least one data collector for collecting data requested by said user;
- a database for storing data collected by said data collector; and
- a network for connecting each client device to [its] a desired server via said data collector; wherein said data collector includes: [;]
- a client management unit for managing at least one client device;
- a query analysis unit for analyzing a request from said client device;
- a query processing unit for processing a query analyzed in said query analysis unit;
- a communication control unit for [deciding] selecting a procedure for accessing at least one of said servers connected to said network according to [the] an analysis result from said query analysis unit;
- a replica creation request analysis unit for analyzing a replica creation request from said client device;
- and
- a replica creation management unit for creating a replica according to an analyzed creation request and managing

said replica using a replica management table which corresponds the content of said created replica to [the] information related to the location of said replica stored in said database; and

said server includes: [;]

a communication control unit for receiving a query analysis result transmitted from at least one of a plurality of said data collectors through said network;

a query processing unit for searching a database at said server side and [create] for creating a response to a received query analysis result; and

means for [controlling] effecting control so that at least either said server or said data collector can select whether to delivery data under the control of said server or said data collector.

A4  
20. (Amended) A data warehouse system, comprising:

at least one client device for accepting a processing request from a user;

at least one server provided with a database [respectively] and used for searching said database according to an access request from said client device;

at least one data collector for collecting data requested by said user;

a database for storing data collected by said data collector; and

a network for connecting each client device to [its] a desired server via said data collector; wherein

said data collector includes: [;]

a client management unit for managing at least one client device;

a query analysis unit for analyzing a request from said client device;

a communication control unit for [deciding] selecting a procedure for accessing at least one of said servers connected to said network according to an analysis result from said query analysis unit;

a replica creation request analysis unit for analyzing a replica creation request from said client; and

A4 a replica creation management unit for creating a replica according to an analyzed creation request and managing said replica using a replica management table which corresponds the content of said created replica to [the] information related to the location of said replica stored in said database; and

said query analysis unit includes: [;]

a processing location decision unit for [deciding] selecting a data collector which processes said query using said replica management table;

a replica usability decision unit for [deciding] determining whether or not a query can be processed using a replica stored in a data collector which should process said query;

a processing unit for directing said query processing unit for a query processing using said replica without transferring any query to said server if said query

processing is [decided] possible using said replica in said data collector; and

a transfer unit for transferring said query to said server if, said query processing is [decided] impossible using said replica stored in said data collector.

21. (Amended) A data warehouse system in accordance with claim 20<sub>1</sub>[;] wherein

said processing location decision unit includes: [;]

a processing unit [for deciding as] responsive to a result of said query analysis unit for determining whether or not the same value is taken in both said query and said replica or one of them includes the other; and

A4 a processing unit for [deciding] determining said position using said relationship of the same value or inclusion and said replica management table.

22. (Amended) A data warehouse system in accordance with claim 20<sub>1</sub>[;] wherein

said processing location decision unit includes: [;]

a processing unit [for deciding as] responsive to a result of said query analysis unit for determining whether or not the same value is taken in both said query and said replica or one of them includes the other;

a processing unit for judging whether or not the same value is taken in both said query and said replica or one of them includes the other;

a processing unit for [deciding] identifying said



A4  
data collector in which said replica exists as a location to process said query if said relationship is decided "yes"; and a processing unit for [deciding] identifying said server as said location to process said query if said relationship is decided "no".

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Claim 23, line 5, delete ";" and insert --:--;  
line 6, delete "deciding" and insert --determining--;  
line 8, delete "deciding" and insert --determining--.

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A5  
24. (Amended) A data warehouse system, comprising:  
at least one client device for accepting a processing request from a user;  
at least one server provided with a database [respectively] and used for searching said database according to an access request from said client device;  
at least one data collector for collecting data requested by said user;  
a database for storing data collected by said data collector; and  
a network for connecting each client device to [its] a desired server via said data collector; wherein  
said data collector includes: [;]  
a client management unit for managing at least one client device;  
a query analysis unit for analyzing a request from

said client device;

a communication control unit for [deciding]  
selecting a procedure for accessing at least one of a  
plurality of said servers connected to said network according  
to [the] an analysis result from said query analysis unit;

a replica creation request analysis unit for  
analyzing a replica creation request from said client device;  
and

A5 a replica creation management unit for creating a  
replica according to an analyzed creation request and managing  
said replica so that said replica can be shared among [said]  
cooperative data collectors when [in] processing said query  
using a replica management table which corresponds the content  
of said created replica to the information related to the  
location of said replica stored in said database; and

said server includes: [;]

a communication control unit for receiving a query  
analysis result transmitted from at least one of said  
cooperative data collectors through said network; and

a query processing unit for searching a database at  
said server side and creating a response to a received query  
analysis result.

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Claim 25, line 2, delete ";" and insert --,--;

line 3, delete ";" and insert --:--.

Claim 26, line 4, after "client" (both occurrences)  
insert

--device--;

line 6, after "client" insert --device--;

line 8, delete "said" and insert --an--;

line 15, delete "the".

Claim 27, line 2, delete "said" and insert --the--.

28. (Amended) A method [for] of collecting data used by a data warehouse, comprising:[];

a client management step [for] of managing at least one client device and collecting data requested by said client device;

A4 a query analyzing step [for] of analyzing each query request from said client device;

a replica creation request analyzing step [for] of analyzing a replica creation request included in said query request;

a replica database storing step [for] of storing a replica created according to said analyzed creation request; and

a replica creation managing step [for] of creating a replica according to [said] an analyzed creation request and managing said replica using a replica management table which corresponds the content of said created replica to [the] information related to the location of a replica stored in [said] a replica database.

29. (Amended) A method [for] of collecting data used by

a data warehouse, comprising: [;]

a client management step [for] of managing at least one client device and collecting data requested by said client device;

a query analyzing step [for] of analyzing each query request from said client device;

a replica creation request analyzing step [for] of analyzing a replica creation request included in said query request;

A6 a replica creation managing step [for] of creating a replica according to [said] an analyzed creation request and managing said replica using a replica management table which corresponds the content of said created replica to [the] information related to the location of a replica stored in [said] a replica database; and

a query processing step [for] of processing [said] an analyzed query request using a replica managed by said replica management table.

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Claim 30, line 3, delete "according" and insert  
--accordance--.

A7 31. (Amended) A data warehouse system, comprising:  
at least one client device for accepting a processing request from a user;  
at least one server provided with a database [respectively] and used for searching said database according to an access request from said client device;

A7  
a network for connecting each client device to [its]  
a desired server; and

at least one data collector connected to said  
network and used for collecting data requested by said user;

a database for storing data collected by said data  
collector; wherein

said data collector includes: [;]

a client management unit for managing at least one  
client device;

a query analysis unit for analyzing a request from  
said client device;

a communication control unit for [deciding]  
selecting a procedure for accessing at least one of a  
plurality of said servers connected to said network according  
to an analysis result from said query analysis unit;

a replica creation request analysis unit for  
analyzing a replica creation request from said client device;  
and

a replica creation management unit for creating a  
replica according to an analyzed creation request and managing  
said replica using a replica management table which  
corresponds the content of said created replica to [the]  
information related to the location of said replica stored in  
said database; and

said server includes: [;]

a communication control unit for receiving a query  
analysis result transmitted from at least one of a plurality  
of said data collectors through said network; and

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a query processing unit for searching a database at said server side and creating a response to a received query analysis result.

Claim 32, line 2, delete ";" and insert --,--;  
line 5, after "client" insert --device--.

33. (Amended) An accounting system used in a data warehouse, comprising: [;]

AS  
a client managing unit for managing at least one client device and collecting data requested from said client device;

a replica creation request analysis unit for analyzing a replica creation request from said client device; and

a replica creation management unit for creating a replica according to an analyzed creation request and managing said replica using a replica management table which corresponds the content of a created replica to [the] information related to the location of said replica stored in a database; wherein

said replica creation management unit includes: [;]

a data collector side negotiation unit for negotiating with said server according to said replica creation request and computer resources usable by said data collector and by said server, thereby [deciding] determining data for which a replica is to be created, as well as a charge for said data; and

a server side negotiation unit for negotiating with said data collector for replica creation conditions including said charge according to computer resources usable by said server.

34. (Amended) A method of accounting used in a data warehouse, comprising:[];

a client managing step [for] of managing at least one client device and collecting data requested from said client device;

AS a data collector side negotiating step [for deciding] of determining data for which a replica is to be created, as well as a charge for said data through negotiation with said server according to said replica creation request and computer resources usable by both of said data collector and said server using a replica creation request analysis unit for analyzing a replica creation request from said client device and a replica management table which corresponds the content of said created replica to [the] information related to the location of a replica stored in said replica database; and

a server side negotiating step [for] of negotiating with said data collector for a replica creation condition including said charge according to computer resources usable by said server.